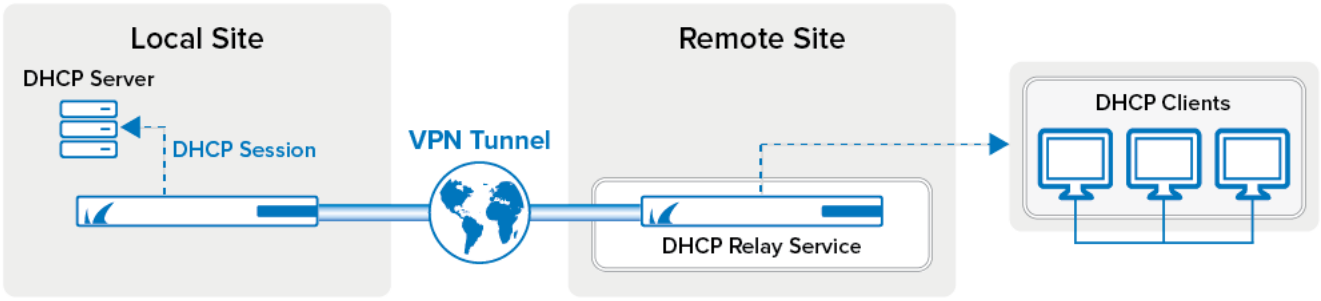
How to Configure a DHCP Relay over a VPN Tunnel

https://campus.barracuda.com/doc/79462801/

To use the same DHCP server in two different networks that are connected by a VPN tunnel, configure DHCP relays on both the local and remote Barracuda CloudGen Firewalls. The DHCP server is located on the local site; the DHCP clients reside on the remote site.



Before You Begin

- Create a Site-to-Site VPN tunnel between both locations.
- Use a separate DHCP server, such as the DHCP server on Windows Servers in your network. It is not possible to use the DHCP service on the CloudGen Firewall in this scenario.

Step 1. Create an Access Rule on the Local Firewall

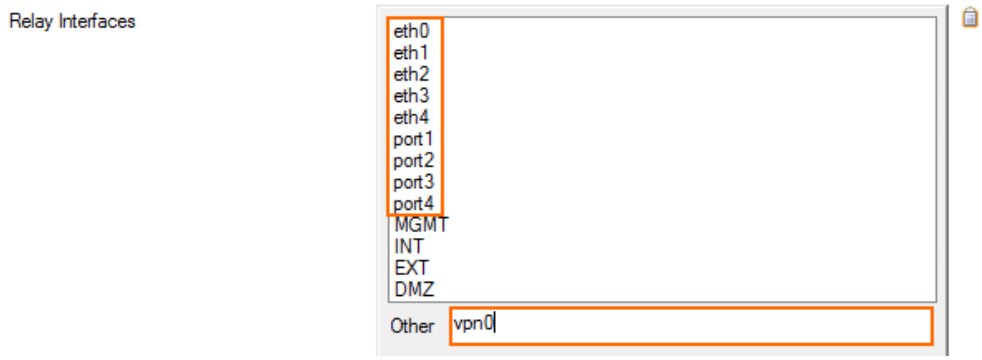
Create a PASS access rule allowing the management IP address of the remote CloudGen Firewall access to the DHCP server.

1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > Firewall > Forwarding Rules**.
2. Click **Lock**.
3. Right-click in the main are and select **New** and **Rule**. The **Edit Rule** window opens.
4. Create the following access rule:
   - **Action** – Select **PASS**.
   - **Source** – Enter the management IP address of the remote CloudGen Firewall.
   - **Service** – Create and select a Service object for UDP Port 67.
   - **Destination** – Enter the IP address of the DHCP server.
   - **Connection** – Select **Original Source IP**.
5. Click **OK**.
6. Click **Send Changes** and **Activate**.

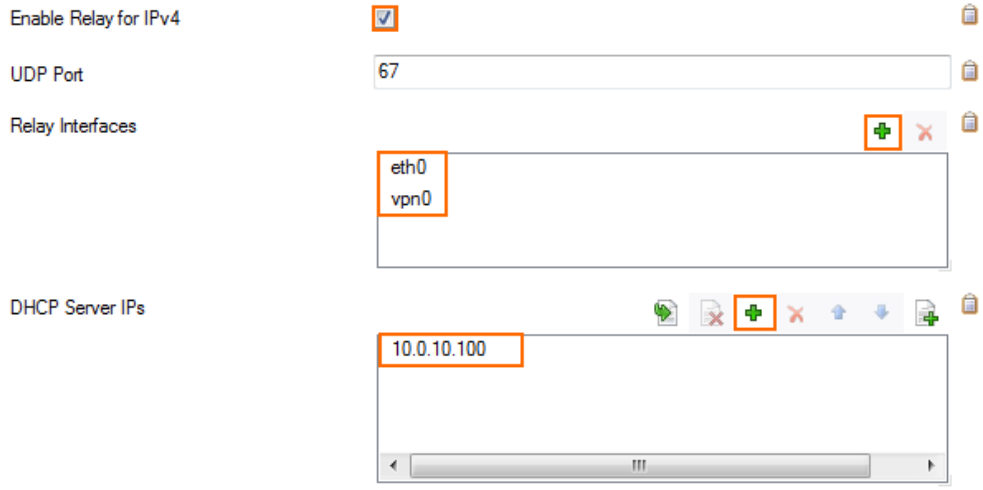
Step 2. Create a DHCP Relay on the Remote Firewall

Configure DHCP Relay on the remote CloudGen Firewall to pass along

1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > DHCP Relay > DHCP Relay Settings**.
2. Click **Lock**.
3. Select the **Enable Relay for IPv4** check box.
4. Click **+** for each **Relay Interface** the DHCP Relay listens on:
    1. Select the internal interface used to connect to the DHCP server from the list. E.g., **eth0**
    2. Enter the VPN interface used for the Site-to-Site tunnel in the **Other** textbox. E.g., vpn0



5. Click **+** and add the **DHCP Server IPs**. E.g., 10.0.10.100



6. Click **Send Changes** and **Activate**.

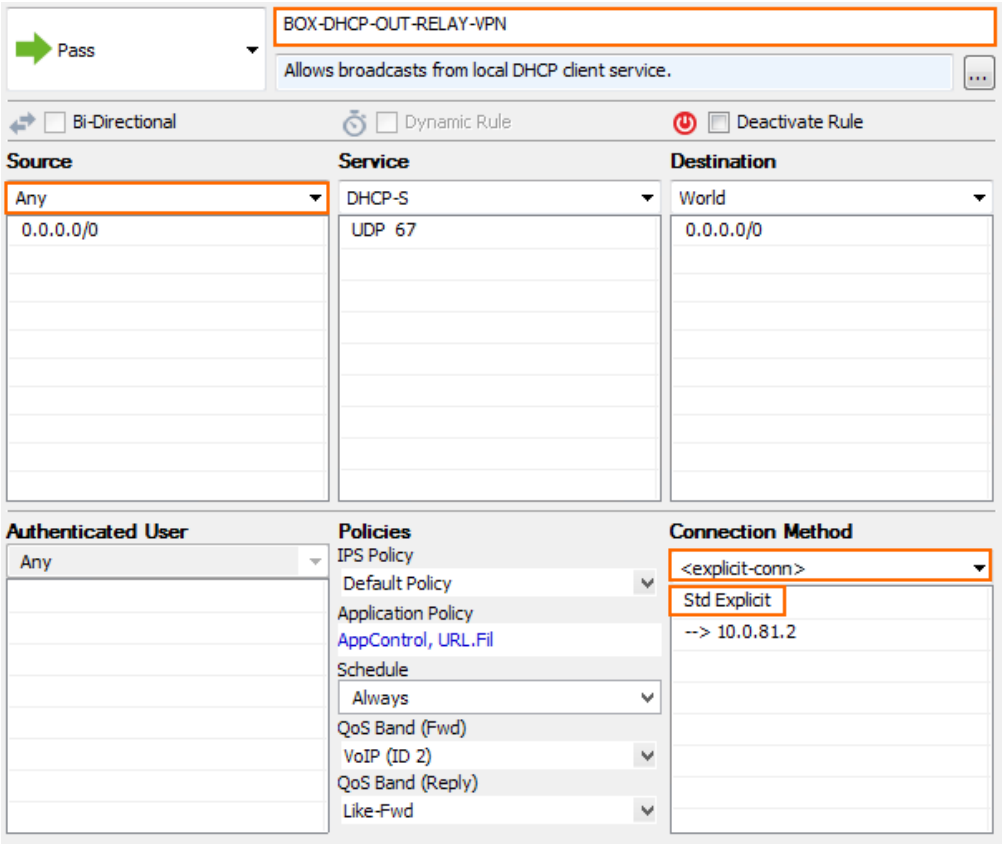
Step 3. Create a Host Firewall Rule on the Remote Firewall

Create an access rule to allow the traffic of the DHCP Relay service into the VPN tunnel.

1. Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > Host**

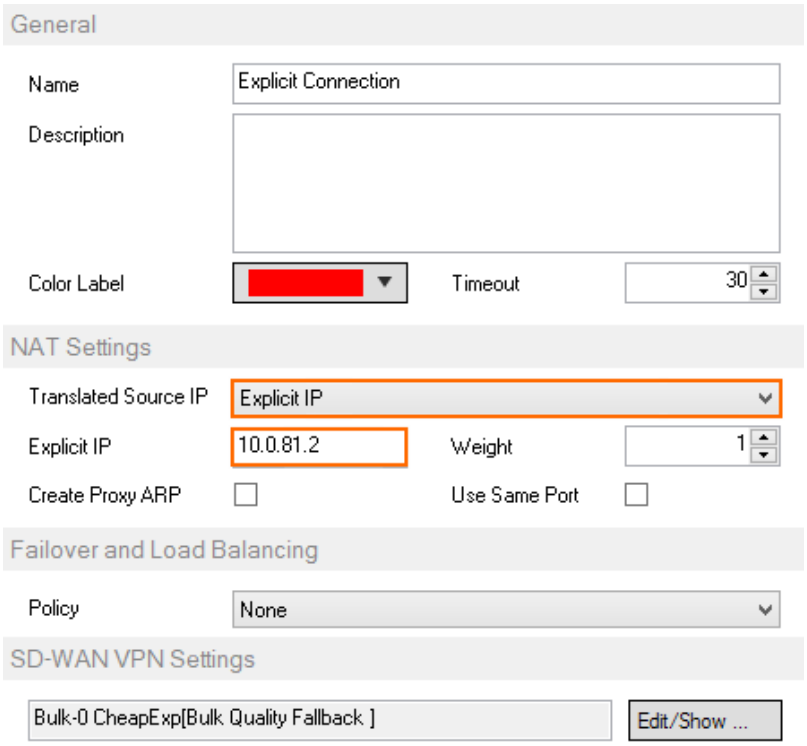
Firewall Rules.

2. Click **Lock**.
3. Click on the **Outbound** rule set.
4. Create a new PASS access rule. The **Edit Rule** window opens.
5. Enter the **Name** of the rule. E.g., BOX-DHCP-OUT-RELAY-VPN
6. Use the following settings for the access rule:
   - **Action** – Select **PASS**.
   - **Source** – Select **Any**.
   - **Service** – Select **DHCP-S**.
   - **Destination** – Select **World**.
7. Select **<explicit-conn>** from the **Connection Method** list.
8. Double-click **Std Explicit** in the **Connection Method** section. The **Edit / Create a Connection Object** window opens.



9. From the **Translated Source IP** list, select **Explicit IP**.
10. Enter the management IP address of the CloudGen Firewall as the **Explicit IP**.

    In case the management IP/network is not inside the VPN Site-to-Site tunnel, you must enter an available server IP that is also part of the tunnel configuration (local network) in order to reach the DHCP server.



11. Click **OK**.
12. Click **OK**.
13. Place the access rule above the **BOX-DHCP-OUT** rule.
14. Click **Send Changes** and **Activate**.

Clients in the remote network can now receive DHCP leases from the DHCP server in the local network.

Figures

1. dhcp_rel_vpn01.png
2. relay01.png
3. relay02.png
4. relay05.png
5. relay06.png

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